

W A A S

SYSTEM UPDATE – MAY 2010

Several significant changes will be taking place in the Wide Area Augmentation System (WAAS) in North America in the coming weeks and months. The purpose of this document is to provide a brief summary of those changes and identify the impact they may have on your TeeJet Technologies guidance systems and GPS receivers.

Please be assured that in most cases these changes in WAAS will have no negative consequences for the operation of your TeeJet Technologies guidance system and GPS receivers. These changes are not unique to TeeJet Technologies products, but rather affect all WAAS users in some manner. At a later date a follow-up document will be available to provide further information and suggested direction for updating some TeeJet Technologies GPS receivers and guidance systems so they are equipped to receive a new WAAS signal (PRN 133) that is not yet available.

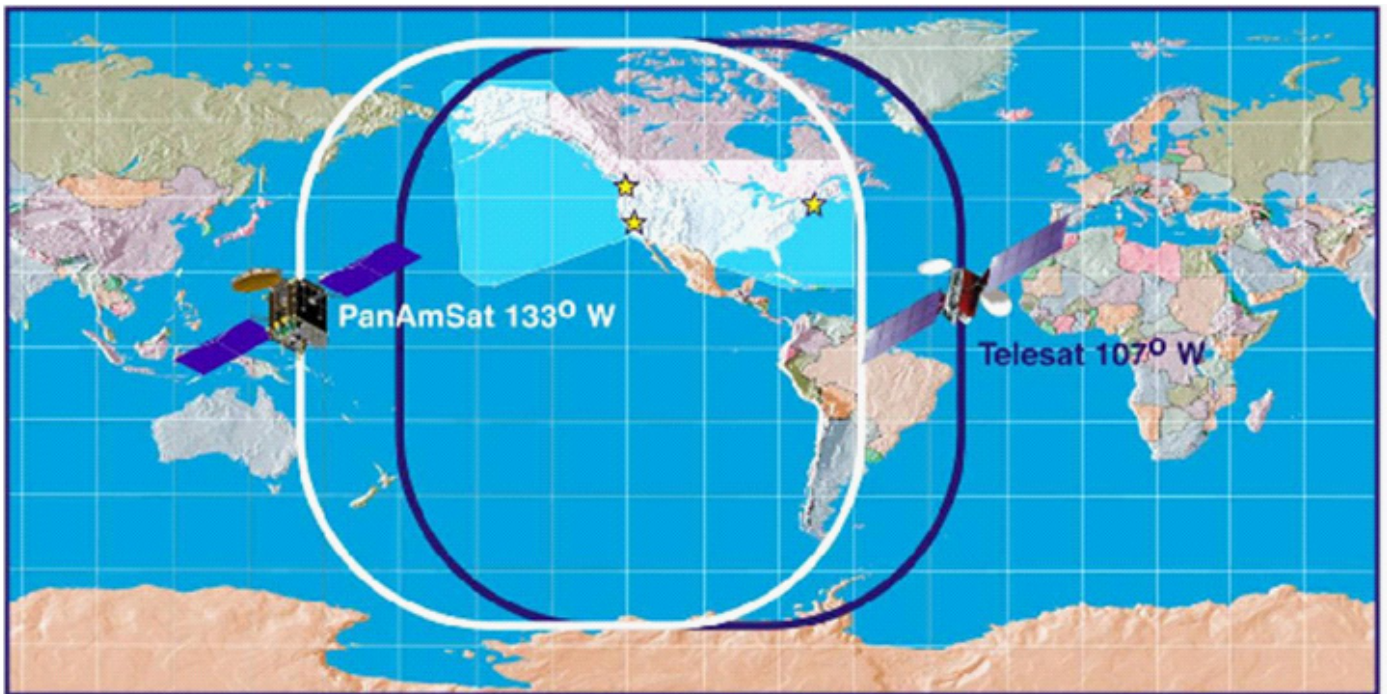


Image courtesy of GPS World Magazine

Imminent failure of satellite G-15 (PanAmSat 133° W / PRN 135)

The current WAAS system utilizes two WAAS satellites, PRN 135 & 138. The reason for two satellites is partly to extend the footprint or coverage of the signal, but most importantly to provide a backup (redundancy) in the signal. All TeeJet Technologies guidance systems and GPS receivers in recent years have been configured to receive PRN 135 & 138, and to use either signal.

The FAA is the organization responsible for operating WAAS, but the satellite portion of the WAAS service is simply leased bandwidth on two commercial satellites. Approximately three weeks ago Intelsat, the operator of satellite G-15 that broadcasts the WAAS PRN 135 signal, reported they had lost the ability to send commands to G-15, and this satellite will most certainly drift into an orbit that renders it useless for broadcasting the WAAS signal within the next couple of weeks.

When the FAA decides to stop broadcasting correction data from PRN135 **nearly all TeeJet Technologies guidance systems and GPS receivers that have been operating on the WAAS system since the last significant change in WAAS on July 31st, 2007 should continue to operate without interruption or change in accuracy** because those units will automatically select and use correction data from PRN138. The only exception to this will be units operating in the Northwest of Alaska, who may experience a loss of DGPS altogether.

The FAA has also reported that with only a single WAAS satellite broadcasting, users may experience a temporary loss of service 3-5 times this year for up to five minutes each while WAAS Uplink Station Switchovers occur.

NOTE: While it is not generally a recommended practice, most TeeJet Technologies guidance systems and GPS receivers can be manually tuned to specific WAAS PRN's. If your GPS unit was manually tuned to PRN 135 (only) it will cease to output DGPS positions once PRN 135 goes off-line. Depending on the exact configuration of your guidance system, it will either

- a) stop working because of a loss of DGPS, or*
- b) continue to operate but at a reduced accuracy using GPS only.*

New WAAS signal in late 2010

Prior to any problems with PRN 135, the FAA was already working on introducing a third WAAS satellite, PRN 133. Given the recent problems with PRN 135, the FAA has significant motivation to try and accelerate the schedule for bringing PRN 133 into service. More information on any changes will be made available by TeeJet Technologies as appropriate.

Your TeeJet Technologies guidance system and GPS receiver will continue to operate properly using PRN 138 only; however, if you would like your system to be configured to maintain WAAS redundancy and therefore have the ability to use PRN 133 once available, the TeeJet Technologies guidance systems and GPS receivers in Table 1 below will require a change in configuration and/or a firmware update. **Please note that at the time of publication of this document the firmware update required to handle PRN 133 in these devices is not yet available.** Once this firmware is available TeeJet Technologies Distributors will be notified. If your TeeJet Technologies guidance system or GPS receiver is not listed in Table 1, it will automatically use PRN 133 and PRN 138 once PRN 133 comes on-line.

Table 1 – TeeJet Technologies units eligible for PRN 133 firmware/configuration update

Model	Application	Typical Serial Numbers (##### = last 4 digits of serial number)
RX350p	All units operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	78-50077#####, 78-50104#####, 95-78025#####, 95-78057#####
RX360p	All units operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	78-50105###
RX370p	All units operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	78-50148#####, 95-78078#####
RX400p	All units operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	78-50062#####, 78-50063#####, 95-78023#####
RX410p	All units operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	78-50161#####
CenterLine 220	All units operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	75-30021#####, 75-30031#####, 75-30035#####, 75-30041#####, 95-75062#####, 95-90002#####
CenterLine 230	Only units in the following serial number range operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	75-30037#####, 95-75066#####
BoomPilot	Only units in the following serial number range operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	75-30038#####
Matrix 570G	Only units in the following serial number range operating on WAAS in North America and shipped from TeeJet Technologies prior to PRN 133 coming on-line	75-30055#####

As more information becomes available it will be distributed to TeeJet Technologies Distributors and will be posted on our website at www.teejet.com. If you have any questions please feel free to contact your regional TeeJet Technologies representative, or contact TeeJet Technologies Customer Service at (217) 747-0235.



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